

WHAT IS CLAIMED IS:

1. A computer-implemented method for distributing parts to customer locations in a volume-based fair share mode, comprising the steps:
prioritizing requests for parts from inventory;
prioritizing locations that have need for the parts; and
forming a shipment plan by iteratively: assigning a defined minimum size allotment of the parts to the location having the current highest priority; and re-assigning the priorities of the locations; until all of the parts from inventory have been assigned or no location needs more of the parts assigned.
2. The method of claim 1, further comprising defining the minimum size allotment.
3. The method of claim 2, wherein each location having a need for the parts from inventory has a percentage need for said parts, and the step of forming a shipment plan includes assigning the minimum size allotment to a highest priority location in each iteration and thereafter re-assigning the priorities such that each location having a need is driven to the same percentage need.
4. The method of claim 3, further comprising performing a pallet size pass on the shipment plan.
5. The method of claim 4, wherein the pallet size pass is based on a threshold quantity at which multiples of shippers are cut in full pallets.
6. The method of claim 5, wherein the pallet size pass is based on a pallet quantity that is a quantity of parts that constitutes a full pallet.
7. The method of claim 6, wherein each shipper that passes through the pallet size pass has a number of parts greater than the threshold quantity and equal to or less than the pallet quantity.
8. The method of claim 4, further comprising performing a volume based filter pass on the shipment plan.

9. The method of claim 8, wherein the volume based filter pass is based on a minimum shipment quantity defining a smallest amount of parts for a specific location or part type.

10. The method of claim 8, wherein the volume based filter pass is based on a percentage impact threshold that is a function of a recommended shipper and a target inventory for a specific location or part type.

11. The method of claim 8, wherein the parts are shipped from a single source.

12. The method of claim 8, wherein the parts are shipped from multiple sources, and further comprising determining splitting the source of the parts to fulfill the requests for parts from the locations.

13. The method of claim 12, wherein the determining includes forming a balanced supply/demand.

14. The method of claim 13, wherein the determining further includes geographic/local sales rules in which specified geographic and local sales shipments are prioritized over optimization of shipments.

15. The method of claim 14, wherein the determining further includes a business rule filtering in which specified business rules are prioritized over optimization of shipments.

16. The method of claim 15, further comprising creating a set of all supply demand scenarios with all possible combinations of fully providing available supply to a demand point in a matrix, and subsequently performing a sum of squares on the matrix, with the highest sum of squares forming a shipment plan.

17. A computer readable medium bearing programming instructions, which, when executed by a computer, cause the computer to determine distribution of parts from inventory to customer locations in a volume-based fair share mode according to the steps:

prioritizing requests for a part from inventory by the customer locations based on the part, a priority need for the part, and inventory available to ship;

prioritizing the customer locations that have a need for the part; and

forming a shipment plan by iteratively:

assigning a defined minimum size allotment of the parts to the customer location having a current highest priority; and

re-assigning the priorities of the customer locations.

18. The computer readable medium of claim 17, the media bearing further programming instructions to cause the computer to perform lot sizing optimization after the shipment plan is formed.

19. The computer readable medium of claim 18, the media bearing further programming instructions to cause the computer to split the source of the parts when there are multiple sources of the parts.

20. A system for determining distribution of goods to customer locations, comprising:
a processor that receives requests for parts to be delivered to customer locations; and
means for forming a shipment plan of the goods to the customer locations on a volume-based fair share basis.